

NEWLY ADDED CLAIMS

57. (New) An MRI system for obtaining an image relating to fluid within a region to be imaged of an object, comprising:

time phase setting means for setting two different cardiac time phases falling into a systole and a diastole of a cardiac cycle of the object;

scanning means for performing, toward the region to be imaged of the object, an MR imaging scan starting in turn at each of the two cardiac time phases set by the time phase setting means to acquire two sets of echo data, the MR imaging scan comprising a first scan starting at one of the two cardiac time phases falling in the systole and a second scan starting at the other of the two cardiac time phases falling in the diastole, both the first scan and the second scan being based on a half-Fourier technique; and

image producing means for producing, from the two sets of echo data acquired by the scanning means, the image relating to the fluid.

58. (New) An MRI system for obtaining an image relating to fluid within a region to be imaged of an object, comprising:

a time phase setting unit configured to set two different cardiac time phases falling into a systole and a diastole of a cardiac cycle of the object;

a scanning unit configured to perform, toward the region to be imaged of the object, an MR imaging scan starting in turn at each of the two cardiac time phases set by the time phase setting unit to acquire two sets of echo data, the MR imaging scan comprising a first scan starting at one of the two cardiac time phases falling in the systole

and a second scan starting at the other of the two cardiac time phases falling in the diastole, both the first scan and the second scan being based on a half-Fourier technique; and

an image producing unit configured to produce, from the two sets of echo data acquired by the scanning unit, the image relating to the fluid.

59. (New) The MRI system of claim 58, wherein the scanning unit is configured to perform both the first and second scans, respectively, on either the same slice of the region or a volume of the region specified by each slice encodes.

60. (New) An MRI system for obtaining an image relating to fluid within an object, in which the object placed in a static magnetic field is subjected to a scan based on a pulse sequence including a readout gradient pulse, comprising:

a time phase setting unit configured to set a cardiac time phase of the object;

a scanning unit configured to perform the scan at the cardiac time phase to acquire an echo signal from the object under a condition that an applied direction of the readout gradient pulse is substantially in accordance with a moving direction of the fluid in motion within the object; and

an image producing unit configured to produce, from the echo signal, the image relating to the fluid.